

Kosh

Work Order ID 159576

159576

Page 1

Thursday, April 13, 2017 10:01:05 AM

Item ID: D3516-11 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Clevis
Start Date: 4/15/2017 Start Qty: 6.00 *6* Cust Item ID:
Required Date: 4/19/2017 Req'd Qty: 6.00 *6* Customer:
Reference: SCHEDULED/U
Approvals: Process Plan: [Signature] Date: APR 13 2017 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3516	Rev C								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	2.66							
FLOW CNC Waterjet	1-Cut as per Dwg D3516 Dwg Rev: C Prog Rev: C 2- Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
46
9-89

6

17/04/15

DAS
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9-89

6

17/04/15

DAS
38
APR 17 2017

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 159576***159576***

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Thursday, April 13, 2017 10:01:05 AM

Item ID: D3516-11 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Clevis
Start Date: 4/15/2017 Start Qty: 6.00 ***6*** Cust Item ID:
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Reference: SCHEDULED/U

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Small Fab	Small Fab	0.21			DAS 30 9-89	6			APR 17 2017
Small Fab	Memo Form as per Dwg D3516	0.29							
140 *140* QC	QC5- Inspect part completeness to step on W/O	0.00				6			DAS 38 9-89 APR 17 2017
Quality Control	Memo	0.00							
150 *150* Packaging	Identify as per dwg & Stock Location: _____	0.00				6			DAS 38 9-89 APR 18 2017
Packaging	Memo *****STOCK IN BASKET CELL***** LOCATION: WA004	0.00							

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐ _____									

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Page 3

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Required Date: 4/19/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED/U

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

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APR 18 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Thursday, April 13, 2017 10:01:05 AM

Page 1

Work Order ID: 159576

159576

Parent Item: D3516-11

D3516-11

Parent Item Name: Clevis

Start Date: 4/15/2017

Required Date: 4/19/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev:A New Issue 06-06-09 JLM
IPP Rev:B chg to revC ecn1136 08-03-18 DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA		Purchased		No		100	sf	66.7600	0.0208	0.131368			
M304S11GA									**				
304/316 0.125 Sheet													

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Location	Loc Qty	Loc Code
MAT020	66.75998	
M136687	0.55998	
M137110	26.2	
M137263	40	

0.15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

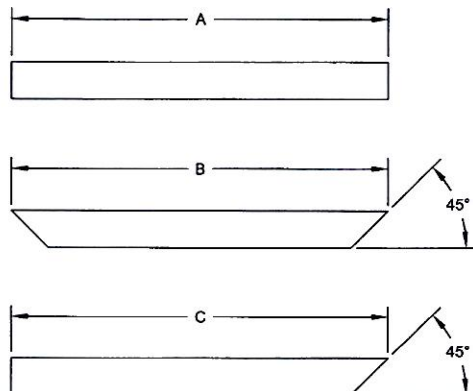
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

PARTS LIST FOR D3516-041 BASKET BASE ASSEMBLY

PART NO	QUANTITY	LENGTH A	LENGTH B	LENGTH C	DESCRIPTION
D2232-3	2	N/A	N/A	N/A	HINGE PLATE
D2327-3	2	N/A	N/A	N/A	BUSHING
D2581	2	N/A	N/A	N/A	MOUNTING BRACKET
D3442-1	2	N/A	N/A	N/A	SHIM
D3516-1	2	—	102.00	—	RIB
D3516-3	2	—	—	2.70	RIB
D3516-5	8	26.75	—	—	RIB
D3516-7	3	45.50	—	—	RIB
D3516-9	4	N/A	N/A	N/A	RIB (MAKE FROM D2235-3)
D3516-11	6	N/A	N/A	N/A	CLEVIS
D3516-13	4	N/A	N/A	N/A	CLEVIS
D3516-15	2	—	—	19.32	RIB
D3725-1	2	N/A	N/A	N/A	HOOP



D3516-041 BASKET BASE ASSEMBLY NOTES:

1) MATERIAL:

FRAME - AISI 304/316 STAINLESS STEEL SQUARE TUBING, 3/4 X 3/4 0.065 WALL
(REF. DART SPEC. M304TS0.750W.065)

MESH - 3/4-16F EXPANDED STAINLESS STEEL
(REF. DART SPEC. M304EX0.75-16F)

2) FINISH: POWDER COAT ENTIRE ASSEMBLY WHITE GLOSS (4.3.5.2) PER DART QSI 005 4.3

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: N/A

7) WEIGHT: 75 lbs

8) WELDING: PER DART QSI 004

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 159576

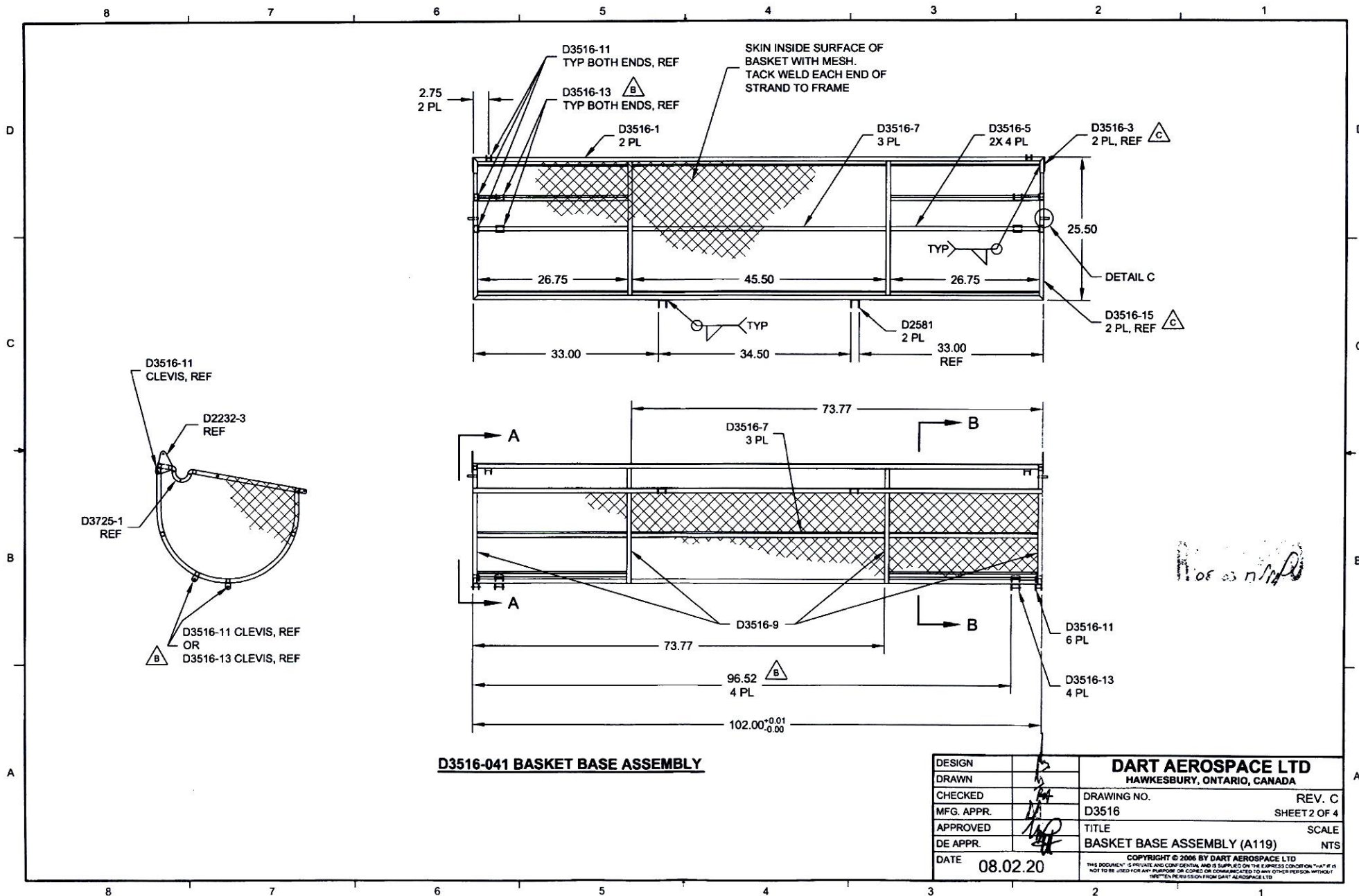
APR 13 2017

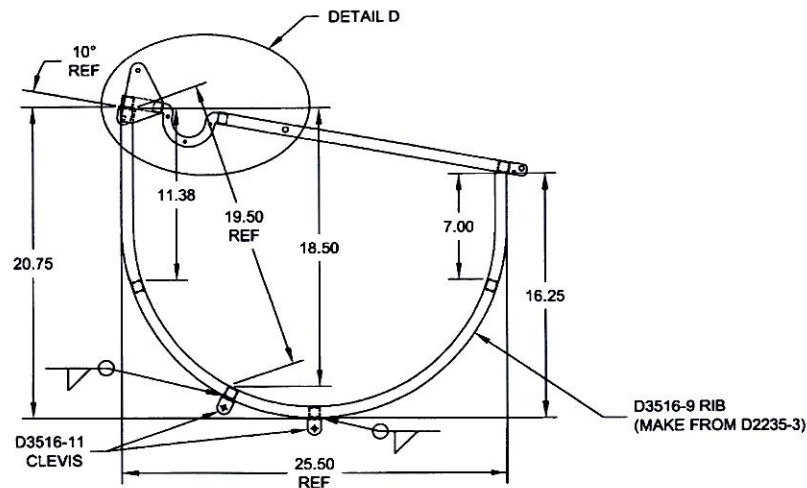
C	ADD D3725-1 (ZNA7-3) AND D3516-15 (ZNA5-3), QTY.(1) PER END OF BASKET BASE; SHORTEN D3516-3 (REF. ECN#1136); REASON: CUSTOMER REQUEST	MB	08.02.20
B	ADD QTY.(4) D3516-13; QTY.(8) D3516-11 WAS QTY.(1) SEE TR-D115-756-1 REV. A	MB	06.07.25
A	NEW ISSUE	MB	06.06.21
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.02.20		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

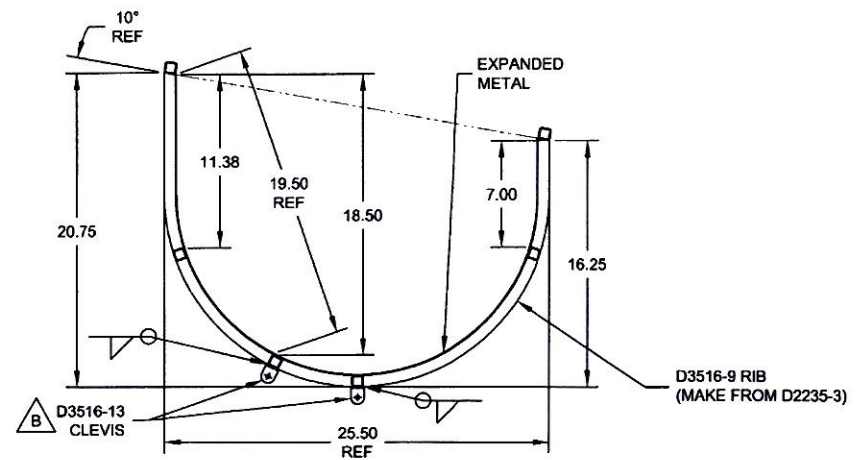
DRAWING NO. D3516
SHEET 1 OF 4
TITLE BASKET BASE ASSEMBLY
SCALE NTS

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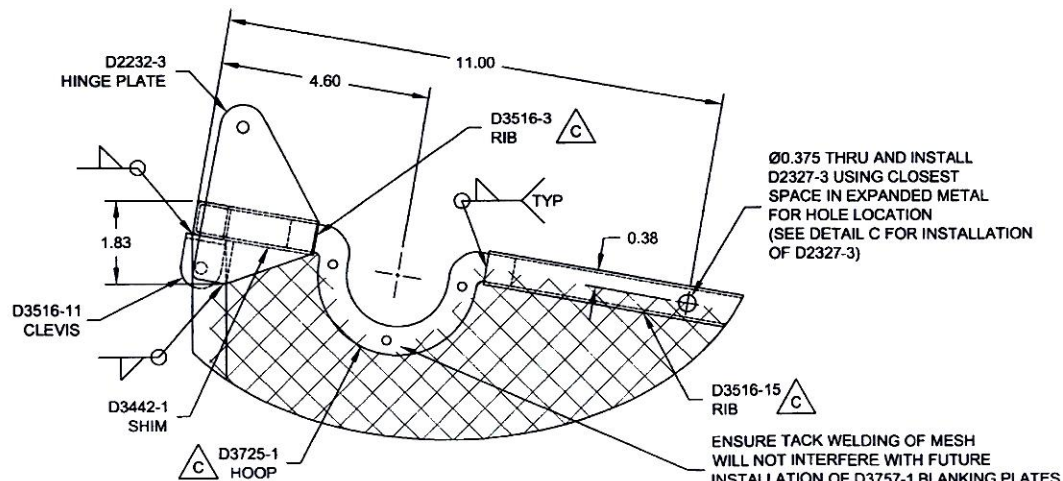




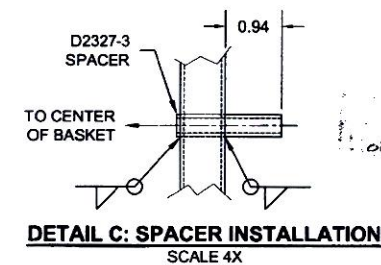
SECTION A-A: END RIB DETAIL
(MESH NOT SHOWN FOR CLARITY)
TYP BOTH ENDS



SECTION B-B: CENTER RIB DETAIL
2 PL



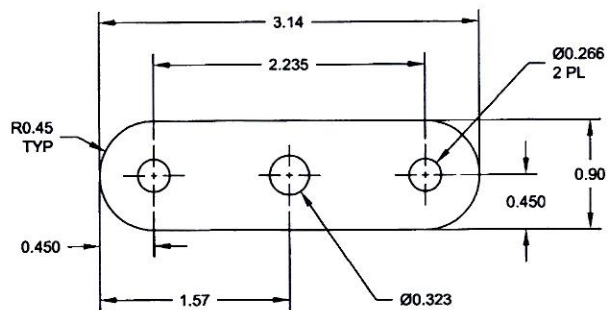
DETAIL D: HOOP & HINGE PLATE DETAIL
FRONT SHOWN, BACK SIMILAR
SCALE 3X



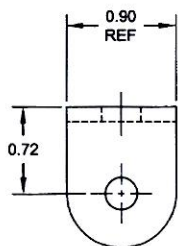
DETAIL C: SPACER INSTALLATION
SCALE 4X

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. REV. C
MFG. APPR.		D3516 SHEET 3 OF 4
APPROVED		TITLE SCALE
DE APPR.		BASKET BASE ASSEMBLY NTS
DATE	08.02.20	COPYRIGHT © 2006 BY DART AEROSPACE LTD

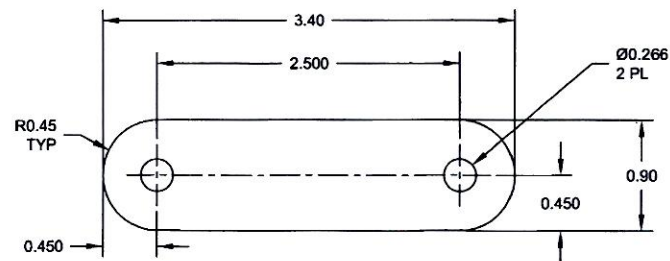
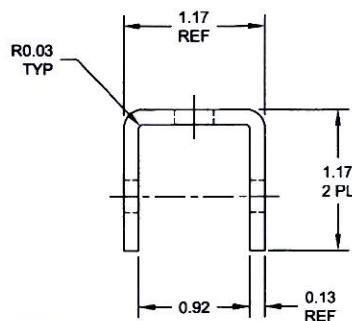
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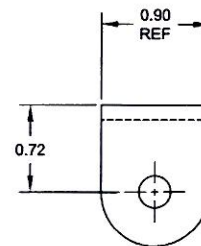
1 D3516-11F CLEVIS FLAT PATTERN



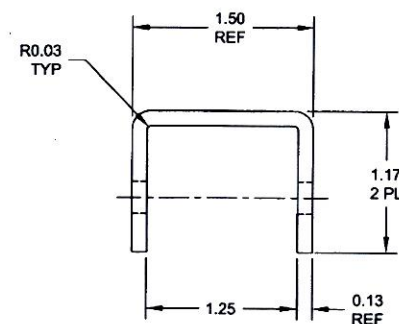
D3516-11 CLEVIS BENDING DETAIL
(MAKE FROM D3516-11F)



1 D3516-13F CLEVIS FLAT PATTERN



D3516-13 CLEVIS BENDING DETAIL
(MAKE FROM D3516-13F)



D3516-11/-13 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR AMS 5524, 11 GAUGE (0.125 THICK)
(REF. DART SPEC. M304S11GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D3516-11 = 0.09 lbs
D3516-13 = 0.10 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3516	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		BASKET BASE ASSEMBLY (A119)	NTS
DATE	08.02.20	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	